

REMARKS:

REMARKS REGARDING AMENDMENTS TO THE SPECIFICATION:

The Office Action indicated objection to the disclosure due to informalities: in paragraph [0038], related to “Figure 1” in the last line of the paragraph that should be -- Figure 3 --.

The specification has been amended at paragraph [0038] to overcome objection to the disclosure by changing “Figure 1” to --Figure 3-- as required by the Examiner.

REMARKS REGARDING CLAIMS AMENDMENTS:

Claim 1 has been amended and request is hereby made for entry of new claim 15 that finds support in the description of the present invention, referencing paragraphs [0029] to [0044].

Claims 1 – 15 are pending in the present application.

IN RESPONSE TO THE OFFICE ACTION:

REJECTION UNDER 35 U.S.C. § 102:

In response to the Office Action applicant has considered the Examiner's selection of Dimberg, as a basis for claims rejection, but respectfully disagrees that the reference meets the teaching requirements of an anticipating reference under 35 U.S.C. §102 or as a reference that renders claims of the present invention obvious under 35 U.S.C. §103. Reasons for applicant's position are given in the following discussion.

Point 3 of the Office Action states that, "Claims 1 – 3, 5 – 7 and 10 – 14 are rejected under 35 U.S.C. §102(b) as being anticipated by Dimberg (US 1,641,745). Thereafter a statement indicating the basis for rejection of claim 1 of the present invention, and reproduced below for convenient reference, essentially reiterates the language of original claim 1, but provides no explanation as to how Dimberg actually teaches the asserted basis for rejection.

Dimberg teaches a method for manufacturing a stator or rotor component having at least one blade 2 joined together with at least one ring element 3, the method comprising providing a joining material 9 in contact with at least one of the blade 2 and the ring element 3, the blade 2 and the ring element 3 arranged in relation to one another to be joined together via a butt joint when heat-treated (page 2, lines 34 – 40); and conducting the heat-treatment so that the joining material 9 forms a melt that joins the ring element 3 and the blade 2 together upon solidification of the melt 9.

Errors of application of Dimberg for rejection of claim 1 are apparent with respect to designation of feature 9 as a "joining material" and selection of page 2, lines 34 – 40 as descriptive of the formation of a "butt joint." With regard to feature 9, Dimberg teaches that this is "a base strip clamping plate" (page 1, lines 101 – 102) that is not near the end of a turbine blade. The base strip clamping plate is not involved in joint formation. Without further explanation, the Office Action fails to show how a joint between a blade and a shroud strip could involve the base strip clamping plate 9 according to the teachings of Dimberg.

The only portion of Dimberg cited by the Office Action, i.e. page 2, lines 34 – 40, states as follows:

"The shroud strip 3 may the be applied to definitely space and angle the outer extremities of the blades, whereupon a filler block 7 may be inserted within the shroud 3 and the clamps 8 applied as shown in Figs. 1 and 2 to positively prevent endwise shifting of the blades."

Upon review of the suggested portion of Dimberg, applicant realized that no actual butt joint is taught. Instead, the description simply clarifies placement of a filler block 7 to “positively prevent end shifting of the blades.” (see page 2, lines 40 – 41). Following positioning of the filler block 7, Dimberg teaches that, “The plate 6 may then be forced into clamping position with the aid of the nuts and studs 27, causing rigid clamping of the blades and the strips 3, 5 within the jig.” (see page 2, lines 41 – 45).

At this point in the method of manufacturing turbines according to Dimberg, the blade assembling jig places the turbine elements in suitable positions to be joined together. The reference then teaches that, “While the blades 2 and the associated elements are thus positively held in properly spaced and angled position, the shroud strip 3 may be rigidly and permanently attached to each of the blades by brazing, welding, soldering and the like.” (see page 2, lines 45 – 51).

The previous discussion clarifies that Dimberg teaches the need for a special jig to position turbine elements correctly for subsequent attachment of the blades to shroud and base strips 3, 5 by attachment means including brazing and soldering. Brazing and soldering represent processes that include heat treatment for rigid attachment of individual blades to a point on the shroud, but do not meet the requirement of amended claim 1 that placement of the joining or bonding material between the blade and the ring element occurs before conducting the heat treatment. It is well known to one of ordinary skill in the art that the processes of soldering or brazing require pre-heating of elements before application of material to permanently join them together.

Completion of the heat treatment according to the present invention provides stator or rotor component claimed by the present invention. In contrast, Dimberg teaches at page 2, lines 66 - 72 the need for additional molding whereby, “The temporarily but rigidly united blade segments consisting of the radially disposed properly spaced and angled blades 2, the shroud segment 3, and the base strip 5, shown in Fig. 3, may then be transferred to the foundry being ready to receive the permanent foundation segment 21.” Review of the reference at page 2, line 120 to page 3, line 9, indicates the need for even more processing steps.

The single heat treatment of the present invention provides improvement over the multiple process steps taught by Dimberg to produce a turbine component having a structure somewhat resembling the structure to the stator or rotor component according to the present invention. Evidence of this is apparent from comparison of Figure 6 of Dimberg and Figure 4 of the present invention.

It appears that requirements for anticipation under 35 U.S.C. § 102, i.e. that “each and every element” of the claimed invention must be found either expressly or inherently described in a single prior art reference, has not been met with respect to amended claim 1. Dimberg is, therefore, ineffective as an anticipating reference for the present invention as currently claimed.

Applicant believes that amended claim 1 is allowable. Since claims 2, 3, 5 – 7, and 10 - 14 have dependency from claim 1, they should likewise be allowable. Accordingly, applicant requests reconsideration and withdrawal of the rejection of claims 1 – 3, 5 – 7 and 10 - 14 under 35 U.S.C. §102.

REJECTION UNDER 35 U.S.C. § 103:

The Office Action included rejection of claims 4, 8 and 9 under 35 U.S.C. §103(a) as being unpatentable, using Dimberg (US 1,651,745) as the primary reference in each case. Claims 4, 8 and 9 of the present invention have dependency from claim 1. It has been shown previously that Dimberg fails to provide basis for rejection of claim 1 as currently amended. It is believed that amended claim 1 is novel over the reference of Dimberg, which should lead to allowability of claims dependent from claim 1. For this reason applicant submits that claims 4, 8 and 9 are patentable over the references applied by the Examiner and should be allowed. Request is respectfully made for reconsideration and withdrawal of the rejection of claims 4, 8 and 9 under 35 USC §103(a).

Applicant has made an earnest attempt to respond to all the points included in the Office Action and, in view of the above, submits that amendment of claim 1 places the application in condition for allowance. Consequently, request is respectfully made for reconsideration of the

application and notification of allowance of claims 1 – 14 as well as new claim 15 in the next paper from the Office.

The undersigned representative requests any extension of time that may be deemed necessary to further the prosecution of this application.

The undersigned representative authorizes the Commissioner to charge any additional fees under 37 C.F.R. 1.16 or 1.17 that may be required, or credit any overpayment, to Deposit Account No. 14-1437, referencing Order No. 07589.0176.PCUS00.

In order to facilitate the resolution of any issues or questions presented by this paper, the Examiner should directly contact the undersigned by phone to further the discussion.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read 'Tracy W. Druce'.

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